

N° 23,828



A.D. 1913

Date of Application, 21st Oct., 1913
(Patent of Addition to No. 10,890, 8th May, 1913)
Complete Specification Accepted, 5th Mar., 1914

COMPLETE SPECIFICATION.

Improvements in and relating to the Mounting of Engines or Transmission Mechanisms in Motor Vehicles.

We, FREDERICK HENRY ROYCE, of Nightingale Road, Osmaston Road, Derby, in the County of Derby, Engineer, and ROLLS-ROYCE LIMITED, of Nightingale Road, in the Town and County aforesaid, Motor Car Manufacturers, do hereby declare the nature of this invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to the system of mounting engines or transmission mechanisms in motor vehicles as specified in our Application for Letters Patent No. 10,890/1913, and consists of certain improvements therein hereinafter more particularly specified.

According to the present invention, the longitudinal axis about which the engine or the mechanism is free to rock is so arranged that it passes through or approximately through the centre of gravity of said engine or mechanism, the object being to support said element or part on the centre about which the reaction of said element or part tends to turn it.

The present invention also comprises an improved disposition and arrangement of the controlling springs whereby a more sensitive control of the rocking motion of the suspended part is obtained.

In the accompanying drawing which shows this invention applied to an engine, Fig. 1 is a view in front elevation, and Fig. 2 is a view in side elevation, partly in section.

In both views similar parts are marked with like letters of reference.

The longitudinal axis *v* about which the engine is arranged to rock is so disposed that it passes through or approximately through the centre of gravity of the engine, which in the example shown lies about the centre of the crank-shaft *w*.

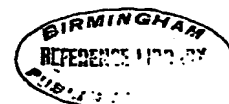
The crank-chamber *a*—on which are mounted the cylinders *b*—is provided with fore and aft trunnions *c*, said trunnions being mounted in housings or bearings *d* carried by brackets *d'* rigidly mounted on cross tubes *e* extending between and fixed to the side members *x* of the frame.

The springs *k* for keeping the engine in a vertical position are mounted in vertically arranged boxes *n'* carried by transversely arranged arms or extensions *n* of the crank-chamber *a*, and operate between the cross tubes *e* and screw plugs *n''* closing the outer ends of the boxes *n'*.

The friction damper between the housings or bearings *d* and the crank-chamber *a* is composed of alternately arranged discs *r* and *s* carried by the housing or bearing *d* and the trunnion *c* respectively, said discs being pressed together by a spring *t* mounted on the end of the trunnion and set up by a nut *t'* therein.

Although in the example shown in the accompanying drawing but one friction [Price 8d.]

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Impts. in the Mounting of Engines or Transmission Mechanisms in Motor Vehicles.

damper is employed, a second one may be fitted on at the other end of the crank-chamber.

Having now particularly described and ascertained the nature of our said invention, and in what manner the same is to be performed, we declare that what we claim is:—

1. In an engine or transmission mechanism for motor vehicles adapted to be mounted so that it can rock about a longitudinal axis and in which said movement is controlled by springs or other elastic cushions and one or more friction dampers, arranging the longitudinal axis so that it passes through or approximately through the centre of gravity of said engine or mechanism. 10
2. In a motor vehicle the combination of fore and aft trunnions carried by the crank-chamber of the engine, the axis of said trunnions passing through the centre of gravity of the engine, of housings or bearings carried by cross members extending between and fixed to the side members of the frame, of transversely arranged arms carried by the crank-chamber and encircling the cross members of the frame carrying the housings or bearings for the trunnions, of vertically arranged boxes carried by said transverse arms, of springs mounted in said boxes and operating between same and the cross members of the frame, and of a frictional damping device operating between the trunnions and their housings or bearings. 20

Dated this 21st day of October, 1913.

PHILLIPSS,
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[This Drawing is a reproduction of the Original on a reduced scale]

FIG. 1.

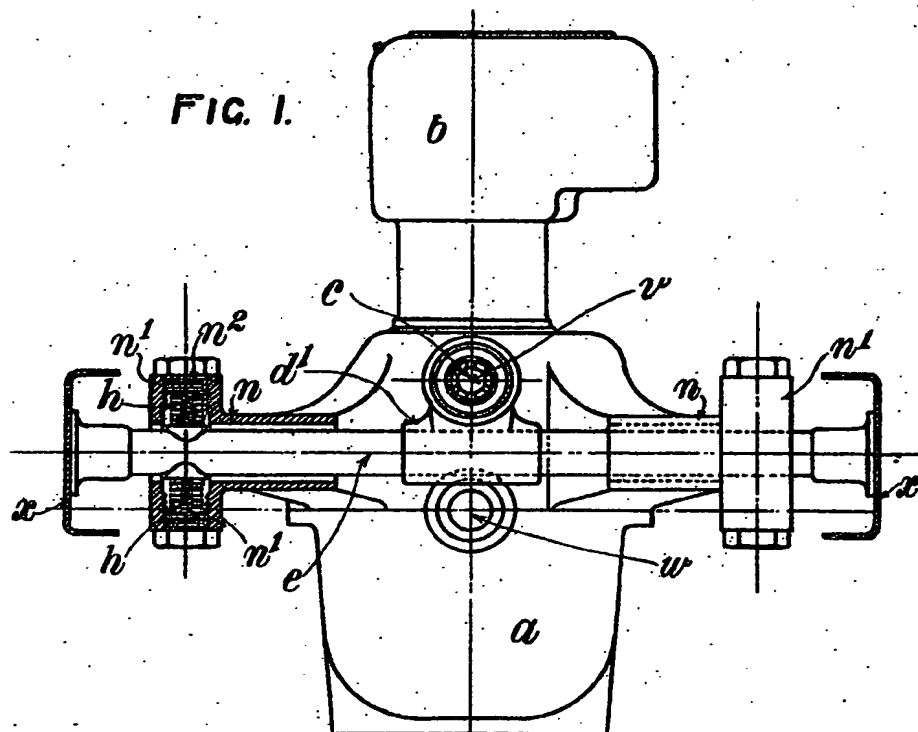
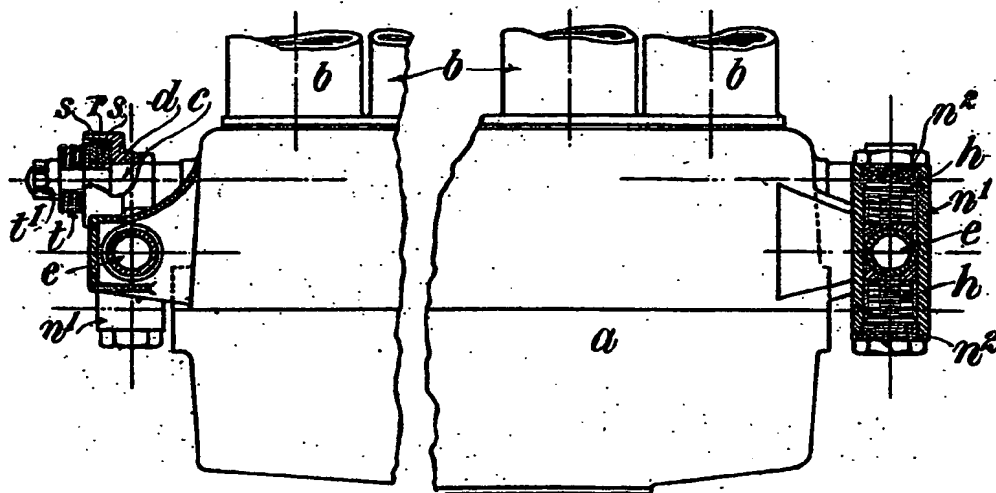


FIG. 2.



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